

AMENDMENTS TO THE DRAWINGS:

Replacement drawing sheets are submitted herewith for Figures 2 and 4. In Figure 2, reference numerals 10 and 11 have been replaced with reference numerals 12 and 14, respectively. In Figure 4, reference designators T1, T2, TA and TB with lead lines have been added.

REMARKS

This application has been amended so as to place it in condition for allowance at the time of the next Official Action.

The Official Action objects to the drawings as failing to comply with 37 CFR 1.84(p)(4). In accordance with the helpful suggestion provided in the Official Action, applicant has replaced reference numerals 10 and 11 with reference numerals 12 and 14 in Figure 2. This replacement of reference numerals constitutes the only changes to sheet 1, and introduces no new matter to the application.

The Official Action states that Figure 1 should be designated with the legend "Prior Art". Applicant respectfully suggests, however, that Figure 1 does not, in fact, illustrate only that which is known. Accordingly, applicant believes that it would be inaccurate to apply such a designation to this figure.

The Official Action objects to the drawings as failing to comply with 37 CFR 1.84(p)(5) for failing to include reference numerals identified in the description. Applicant has amended Figure 4 on drawing sheet 3 to add the reference designators T1, T2, TA and TB. These additions represent the only modifications to sheet 3, and such modifications introduce no new matter to the application.

In light of the analysis and changes described above, reconsideration and withdrawal of all the drawing objections are respectfully requested.

The Official Action identifies a number of informalities in the narrative portion of the specification. In order to eliminate the bases for this objection, applicant has prepared and encloses a substitute specification for this application. The substitute specification is provided in both clean and marked forms. Applicant affirmatively states through its counsel that the substitute specification introduces no new matter to the application.

The Official Action objects to a number of claims based on informalities. Applicant has amended the claims as necessary to eliminate the bases for this objection, the reconsideration and withdrawal of which are therefore respectfully requested.

As to the stated bases for the claim objection, applicant notes that the term "non-contact" as it is used in the preamble of claim 1 is accurate. While the Official Action's point is well taken, namely that circuit wires are in contact with every electrode, the "non-contact" modifier refers to the relationship between the first object and second object. If it is the Examiner's considered position that the current language in the preamble will be misleading to one of skill in the art reading the claim, applicant is, of course, open to suggestions

for claim amendment that serve to clarify the non-contact feature.

As to the objection lodged against claims 24 and 25 for the recitation of "the analogue calculation", applicant notes that this term is earlier recited in claim 22, from which each of claims 24 and 25 ultimately depends.

The Official Action rejects claims 1-10, 12-15, and 18-26 under 35 USC §103(a) as being unpatentable over MAST in view of MCCORMICK and NORTHROP. The Official Action also explicitly states, however, that claims 16 and 17 are allowable but for their dependence from rejected base claims.

Applicant has amended independent claim 1 to incorporate additional features recited in original claim 16, including those that underlie the allowability of such claim. Such amendment should result in the allowability of claim 1 and by extension the remaining claims in the application, each of which ultimately depends from independent claim 1.

In light of the amendments provided above, the arguments offered in support thereof, as well as the stated allowability of claim 16 and reasons therefor, applicant believes that the present application is in condition for allowance and an early indication of the same is respectfully requested.

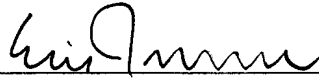
If the Examiner has any questions or requires further clarification of any of the above points, the Examiner may

contact the undersigned attorney so that this application may continue to be expeditiously advanced.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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EJ/lrs

**APPENDIX:**

The Appendix includes the following items:

- substitute specification and marked-up version of originally-filed specification
- replacement drawing sheets for Figures 2 and 4